MAINTENANCE ESSENTIAL FOR STAYING ON THE ROAD IN WINTER

V Corps Safety Office release

One of the best defenses drivers have against harsh winter weather is a well-maintained vehicle.

Listed below are some of the essential maintenance tasks that military vehicle and equipment operators are expected to check and correct as winter sets in, that are helpful for private vehicles as well, and some tips for “winterizing” vehicles.

Operator’s checklist

The operator’s checklist includes inspecting:

-- For missing or damaged side and rear view mirrors

-- For the presence and operation of service and blackout drive, side marker, turn signals, and stop/tail lights

-- Seat belts for security, damage, and operation of buckle and clasp

-- For missing or damaged fire extinguishers, and to ensure the lead seal on an extinguisher and a gauge for proper pressure are in place

-- Tires for proper pressure and signs of irregular wear

-- Engine coolant systems for proper operation, leaks and missing radiator caps

-- The condition of antifreeze. Cooling systems should be protected to -30 degrees Fahrenheit

-- The fuel system for leaks and the condition of the fuel tank cap and seal

-- Windshield wipers and washers, including nozzles and the fluid level in the washer reservoir

-- BII and pioneer tools for completeness and serviceability

-- The serviceability and size of tire chains

-- Slave cables and tow bars for completeness and serviceability. All equipment operators and maintenance personnel should be familiar with vehicle towing and slave starting procedures as well

-- To ensure operator and maintenance manuals are with the equipment

Winterizing

Winter driving takes a bit more preparedness for the cold harsh days of the season. Here are some tips for giving vehicles a thorough “winterization.”

Tire Maintenance

Rain, snow and ice reduce tire traction and compromise control of a vehicle. But there are some ways to help solve the problem:

1. Get winter tires

Winter tires dig into loose snow and compress it into their large tread grooves (like packing a snowball) for snow-to-snow traction. You can choose from two types:

-- High performance winter tires designed to meet strict government regulations for driving on high-speed highways in Europe. These feature large directional and/or asymmetric treads to enhance handling and steering, resist hydroplaning, and help tires work through slush, or

-- “Studless” winter tires – the most common winter tire type -- that increase traction on ice through the use of advanced tread rubber compounds. They're a safe alternative to studded tires, which are forbidden in Germany.

2. Check tire pressure

Fall and early winter are the most critical times to check tire inflation, because colder temperatures lower tire pressure. For every 10-degree Fahrenheit change in temperature, a tire's inflation will change about one pound per square inch -- rising with higher temperatures and going down with lower temperatures. Tire pressure should be checked in the morning before driving a few miles. Tires on vehicles parked in attached or heated garages will "lose" pressure when leaving its warmth.

3. Check tire treads and sidewalls

Look for thin or uneven tread wear. Take a Lincoln-head penny and insert it Lincoln-head first into the tread at the most worn part of the tire. If the top of Lincoln's head can be seen, the tires are too worn. Cut or damaged sidewalls are also weak areas that can collapse under severe conditions.

Under the hood

1. Check the battery

It takes a lot more power to start a vehicle in cold weather. Check for clean and tight connections and proper fluid levels. Clean any corrosion from the battery’s terminals.

2. Check the cooling system

The level, acidity and concentration of radiator fluids should be checked at least every 3,000 miles. A good rule of thumb is that a mixture of 50% anti-freeze and 50% water will protect the system from freezing down to -40 degrees Fahrenheit.

3. Clean the fuel system

Moisture in the fuel system can freeze in cold weather. Adding a de-icer (available at exchanges and many service stations) to fuel should prevent the problem.

4. Change the oil and oil filter

You may want to use a thinner oil in wintertime, when cold weather tends to thicken oil. Check the vehicle owner's manual for the grade of oil recommended for winter.

5. Inspect and replace

Inspect the air filter, rubber hoses and drive belts, and replace them if necessary. Check all fluid levels -- transmission, brake, differential, power steering and window washer fluids.

Winter safety kit

Keeping a winter safety kit in a vehicle could be a “trip-saver” – or even a lifesaver -- on winter roads. A kit should include:

1. Winter necessities such as an ice scraper (one with a brush at one end is best); a small shovel; tire chains; extra washer fluid; boots and gloves, and sand, kitty litter, salt, a traction mat or old house shingles for emergency traction on slippery roads.

2. Emergency supplies such as extra clothing and blankets; a flashlight with spare batteries; energy bars or dried snacks; a compass; drinking water, a battery-powered radio with spare batteries; a reflective warning device or safety triangle; a first aid kit; booster cables; a tow chain or strap; a warning light or safety flares, and extra anti-freeze (or a water/anti-freeze mix) and funnel for radiator refills.

3. Repair supplies such as a screwdriver; pliers; rubber hammer; wrench; a can of penetrating oil; an old scarf and belt for emergency hose repairs, and a small throw rug and old shower curtain (for kneeling beside the vehicle or getting under it).